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## AMERICAN MANUFACTURING INTERESTS.

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THE interest awakened in regard to the manufacturing industries of the United States by the recent tariff discussions in Congress suggests the propriety of considering some of the more important circumstances attending the genesis and development of American manufactures.

The establishment of manufactures on the shores of the western world was contemporaneous with its earliest settlement. The artisan came with the trader, the agriculturist, the school-master, and the preacher. Up to the time of the Revolution, a large proportion of the colonial manufactures was the product of household industries. These industries gave employment to both the male and the female members of families. Alexander Hamilton said, as late as the year 1792: "It is computed, in a number of districts, that two-thirds, three-fourths, and even four-fifths of all the clothing of the inhabitants is made by themselves." But the increasing population and wealth of the colonies early gave rise to manufactories devoted to special industries. Furnaces and forges were constructed for the manufacture of iron and steel, and manufactories of vehicles, household furniture, farm implements, hats and caps, glass, woolen and cotton goods, silk goods, linen goods, leather, gunpowder, paper, books, sugar, and other articles, were

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established in several of the colonies, but chiefly in New York and New England. From the very beginning, the colonists exhibited a marked aptitude for mechanical pursuits. The exigencies of their social, industrial, and commercial life excited the quest for discoveries, and stimulated genius to new inventions and adaptations. The fact that they were so far removed from the methods which characterized European mechanical industries gave a stamp of originality to American manufactures, which, in later days, has manifested itself in the peculiarities of a thousand mechanic arts. The success of the industrial enterprises of the colonists was based upon faculty and wholesome lives. Through the tuition of self-culture, from generation to generation, inventive genius became an inherited instinct.

From an early date the mother country bitterly opposed the establishment of manufactures in the American colonies, her avowed policy being to confine their external commerce to the exportation of products of agriculture, of the forest, and of the fisheries, to England alone and in British ships, and in return to supply them with the products of her own manufactories. But this policy served only to illustrate the irony of events. In the end, it proved to be protective and stimulating, and not repressive of the colonial industries. The restraints imposed by the British Government in connection with the duties laid upon colonial produce when imported into Great Britain, and the great cost of transporting the crude products of the colonies across the Atlantic Ocean, left little to them for their labor. In order, therefore, to supply their needs, they were forced to create a market for their products by becoming their own artificers. Household mechanical industry increased, and hundreds of manufactories were established in the several colonies. The sales of goods of colonial manufacture were at first confined to the towns or neighborhoods in which they were produced, but soon were extended to greater distances. An intercolonial trade thus sprang up which was the beginning of the enormous internal commerce of the United States of the present day. After awhile, the colonies were enabled to export their manufactured products to foreign countries, and they did so to a considerable extent, in defiance of the edicts of the mother country.

The laws of Parliament and the orders of the British Board of Trade, for the suppression of American manufactures, were, from the beginning, almost entirely inoperative, owing to the

impracticability of administering them. It was found to be impossible to distinguish between household manufactures and manufactures for sale, or between the products of flouring-mills, fulling-mills, and the like, erected for the purpose of supplying the demands of neighborhoods, and those established with a view to trade between the colonies and with foreign countries. The impracticability of enforcing the repressive measures in regard to American manufactures was clearly recognized by the colonial governors. About the year 1715, Lord Cornbury, Governor of the Colony of New York, said, in an official report: "I myself have seen serge made upon Long Island that any man may wear. Now, if they begin to make serge, they will, in time, make coarse cloth, and then fine cloth." He adds some dolorous remarks in regard to the insubordinate attitude assumed by the colonists even at that early date. In 1754, the British Board of Trade rebuked the amiable Governor Shirley, of Massachusetts, for having incorporated "A society for setting up rival manufactories, as the passing of such laws in the colonies has always been restrained."

The persistent and open violation of the edicts of the British Board of Trade, regarding manufacturing enterprises, begat a feeling of confidence on the part of the colonists in their ability to resist British oppression. The vigorous growth attained by American manufactures during the colonial period is evidenced by the fact that the colonists were able to meet all their home needs, and besides to clothe their army and to supply its commissariat during the terrible struggle of the seven years' war. Not the remotest allusion is made in the Declaration of Independence to the repressive measures of Great Britain in regard to colonial manufactures, and it is believed that such mention would have been more likely to provoke a smile than to excite indignation. Besides, a charge of this nature, even if sustained, was not one upon which the colonists themselves could have united.

The predominant public sentiment in the United States regarding American manufactures, at the time of the organization of the Federal Government, is clearly formulated in the following preamble to the Act of August 10, 1790, the second Act of the first Congress:

"Whereas, it is necessary for the support of the Government, for the discharge of the debts of the United States, and the encouragement and protection of manufactures, that duties be laid on goods, wares, and merchandise imported," etc.

In his message to Congress, dated January 8, 1790, President Washington invited the attention of that body to the importance of promoting manufactures. On the 15th of January, the House of Representatives, by resolution, referred this portion of the President's message to Alexander Hamilton, Secretary of the Treasury, "to prepare and report a proper plan, or plans, conformably to the recommendation of the President."

Hamilton's memorable report in reply to this resolution was submitted to the next Congress. It has perhaps justly been regarded as the ablest of all his State papers. He devoted to it nearly two years. It was the result of extensive inquiries and investigations in the United States and in foreign countries, and of patient study and reflection. If it had been the only public act of his life, it would have stamped him as a statesman of transcendent ability. He recommended a vigorous system of protection and encouragement of American industries by means of duties on imports, bounties, and premiums. It must be remembered that these measures were, in a high degree, retaliatory, similar measures being at that time enforced by other commercial nations. It should also be observed that he did not announce the measures which he advocated as being applicable to all countries and at all times.

Even in Hamilton's day objections were strenuously made to any form of legislation having in view the direct object of protecting American manufactures as against the competition of foreign manufactures. It was urged that the country ought to devote its chief attention to agriculture, and that any assistance extended to manufactures by means of duties on imports was, in effect, a tax upon the agricultural interests of the country. It was even held that agriculture was not only the most productive, but the only productive industry. Hamilton, in his report, felt himself called upon to consider this and other objections. He did so patiently and seriously, but between the lines it is not difficult to read his keen apprehension of the absurdity of these objections. He had not at his command the requisite statistics which would enable him to prove conclusively the correctness of his views,—a fact which he frankly admitted; but, by the intuitions of his transcendent genius as a statesman, he clearly foresaw and ably maintained that which has since become a matter of demonstration, namely, that labor in manufactures is equal, if, indeed, not superior in its productiveness of indi-

vidual and national wealth, to labor in agriculture, and that manufacturing industries are not only in the highest degree promotive of the interests of agriculture, of mining, and of commerce, but that they are absolutely essential to the prosperity of those interests.

Hamilton also urged the importance of aiding manufactures, upon the ground that the division of labor and the use of machinery in manufactures involve a great variety of employments, "thereby furnishing a greater scope of usefulness for the diversity of talents and disposition which discriminate men from each other, and a more ample field for enterprise." Besides, he maintained that the home market for the surplus products of the soil which would be created by the promotion of manufactures would be far more steady and reliable than foreign markets.

Notwithstanding the earnest utterances of Washington and the cogent reasonings of Hamilton, the principles which they enunciated regarding American manufactures have ever since been hotly contested. During the last fifty years there has been taught, in a large proportion of the schools and colleges of this country, a political economy as cold toward American manufactures as though they were a fungoid parasite upon American enterprise, instead of being, as they are, the best product of its vital forces. It is proposed here to consider how far the postulates and the predictions of Hamilton have been sustained by clearly ascertained and recorded facts expressive of the commercial and industrial experiences of the country. Attention will also be invited to the relations now existing between the manufacturing industries and the other great business interests of the country.

The conditions under which manufactures are carried on have, since the days of Hamilton, undergone radical changes, as the result of the increase and expansion of population, the introduction and extension of railroads, and the greatly increased facilities for transportation which we now enjoy, and as the result also of important discoveries, inventions, and adaptations. The variety of manufactured articles has been almost infinitely increased, and their ministration to the needs, tastes, and habits of the people has been multiplied a thousand fold. For more than half a century after Hamilton wrote his grand essay, the highest guarantee of the quality of many articles of merchan-

dise was to say that they were imported; but during the last twenty-five years the best assurance of the superiority of similar articles is to say that they are of American manufacture. When John Randolph felt like going out of his way to kick a sheep, he had to send his pamphlets across the Atlantic ocean, in a slow sailing vessel, in order to get them neatly bound, and he was happy if they came back to him within a year. But all that is changed. Hundreds of manufactured articles, formerly imported, are now supplied in our own markets exclusively by American artisans. With respect to certain other articles, the American manufacturer is able to compete in foreign markets with the manufacturers of other countries. The value of the exports of products of manufacture from the United States increased from \$45,658,873 in 1860 to \$103,132,481 in 1882, exceeding in the latter year the total value of imports into the United States during the year 1840.

It is not of course practicable here to trace the history of the struggle between the advocates and the opponents of governmental protection of manufactures from the time of Hamilton to the present day. Suffice it to say, that while neither policy has ever been fully adopted, the preponderance of public sentiment has been sometimes on one side and sometimes on the other. Attention will here be confined to the growth of the manufacturing industries of the United States since the year 1850, but especially since the year 1860.

According to the census, the value of the products of manufactures in the United States was, in 1850, \$1,019,106,616; in 1860, \$1,885,861,676; in 1870, \$3,432,415,933; \* and in 1880, \$5,369,579,191. During the period from 1860 to 1880 the manufacturing industries of the United States were more highly protected than during any previous period in the history of the country. The average *ad valorem* rate on imported merchandise was increased from fourteen per cent. in 1861 to forty-two per cent. in 1865. It is an historical fact, however, that this large increase of duties was prompted by the needs of national defense and not by any prevailing sentiment in favor of the protection of American enterprise. As the result of the large increase of duties on imports, the customs revenues increased from \$39,038,269 in 1861 to \$177,056,523 in 1866. Although the duties on tea and coffee

\*Reduced to specie values.

were reduced in 1870 and abolished in 1872, and other reductions of duties were subsequently made, the aggregate duties on imports during the year ending June 30, 1882, had increased to \$216,138,916.

At the same time the foreign commerce of the United States grew more rapidly than ever before. The total value of exports increased from \$333,576,057 in 1860 to \$835,638,658 in 1880, and the value of imports increased from \$353,616,119 in 1860 to \$667,954,746 in 1880. During the same period agriculture, mining, internal commerce, and all the other great business interests of the country advanced more rapidly than ever before. The railroad mileage of the country increased from 30,635 miles in 1860 to 93,671 miles in 1880. Inventive genius, also, was stimulated as never before in the history of the country, the number of patents issued having increased from 4,819 in 1860 to 13,947 in 1880.

We have next to consider the concurrent development and present condition of the manufacturing, commercial, transportation, and banking interests of the United States from 1860 to 1880, and, in so far as may be practicable, to trace the influence exerted by the growth of our manufacturing industries upon the development of the other great business interests of the country.

*Agriculture.*—The relative value of the products of manufactures and of agriculture can only be stated approximately. It is estimated that the total value of the products of agriculture during the census year, 1880, amounted to \$3,600,000,000.\*

The value of the products of manufactures is stated by the census at \$5,369,579,191. If from this we subtract the value of materials used in the processes of manufacture, viz., \$3,396,823,549, it leaves in round numbers \$2,000,000,000. The census, however, takes no account of any establishment the value of the products of which during the census year was less than \$500. It also omits all products of manufactures carried on by railroad

\* This is an estimate made by Mr. J. R. Dodge, Statistician of the Department of Agriculture, and Special Agent of the Census for the Collection of Statistics in regard to Agriculture. The census gives \$2,213,402,564 as the estimated value of farm productions. This, however, does not include the increased value of live stock, nor the value of the products of pasturage on the public lands. It also omits to a very large extent products of horticulture.



companies, products of quartz milling, petroleum refining, gas works, and newspaper establishments. The question also arises, in attempting to make a comparison between the value of the products of agriculture and of manufactures, as to whether, if the value of materials is subtracted from the value of products of manufacture, the value of fertilizers and other materials should not also be subtracted from the gross value of products of agriculture. Besides all this, it is known that there is considerable duplication in the total census valuation of products of manufacture. From the best information which can be obtained, it is estimated that the value of products of manufacture in the United States is from eighty to ninety per cent. of the value of the products of agriculture.

Contemporaneously with the increase in the value of products of manufacture, from \$1,885,861,676 in 1860 to \$5,369,579,191\* in 1880, there was an increase in the acreage of land in farms from 407,000,000 acres in 1860 to 536,000,000 acres in 1880,—an increase of thirty-two per cent., and an increase in the value of farms of from \$6,645,045,007 in 1860 to \$10,197,096,776 in 1880, or fifty-three per cent.

The importance of manufactures to agriculture is indicated by the following facts in regard to the value of products of agriculture consumed in this country and exported to foreign countries: The total value of the products of agriculture in 1880, as before stated, amounted to about \$3,600,000,000, this being the value on the farm. The farm value of the exports of products of agriculture during the year ending June 30, 1880, amounted, however, to only about \$500,000,000, showing that eighty-six per cent. of the total value of products of agriculture was consumed in the United States, and that only fourteen per cent. was exported to foreign countries. In other words, the quantity consumed at home was six times that sent abroad.

The extent to which the home market for agricultural products is sustained by manufacturing industries may be inferred from the following facts in regard to occupations: According to the census of 1880 there were in the United States 17,392,099 persons having occupations, of whom about 3,600,000, or twenty-one per cent., were employed in manufacturing and mechanical industries. Presumably, the earnings of these persons supplied

\* Census valuation, the values of materials being included in both cases.

the means of support to at least 1,000,000 persons, including all workers and those directly dependent upon them for the means of living. Besides this, the manufacturing industries of the country were an essential condition to the employment of a large proportion of the 234,228 persons engaged in mining, the 4,074,238 persons rendering personal and professional services, and the 1,810,256 persons employed in trade and transportation. It must be remembered, also, that manufactures give rise not only to a very large and constant demand for products of agriculture as food, but also for such products as materials in the mechanic arts. It is, of course, impossible, even approximately, to estimate the total number of persons actually employed in agriculture, in mining, in trade, or in transportation, or rendering personal or professional services who, together with their families, in a greater or less degree, indirectly owe their means of support to manufactures. The foregoing facts in regard to the number of persons engaged in the various occupations also serve, in a striking manner, to illustrate the importance of manufactures to the interests of labor.

The relations of agriculture to home markets are, perhaps, more clearly indicated by the following fact: The total value of the products of agriculture exported during the year ending June 30, 1882, amounted to \$552,219,819, of which \$512,867,989, or ninety-three per cent., consisted of cotton, breadstuffs, provisions, and live animals, leaving only \$39,351,830, or seven per cent., as the value of all other agricultural products exported. But, from the best information which can be obtained, it appears that about ninety-five per cent. of the total value of the exports of breadstuffs, live animals, and provisions was the product of our great surplus-producing Western States. The area within which cotton is exclusively produced is well known. These facts, therefore, clearly show that the agricultural interests of the New England States, and of the other Atlantic seaboard States north of the cotton belt, depend almost entirely upon home markets, *i. e.*, markets mainly sustained by manufacturing industries. Besides, it is evident from what has just been stated that the farmers of the Western States depend almost entirely upon home markets for the sale of all their products other than grain, provisions, and live animals, and that the farmers of the Southern States depend almost entirely upon home markets for the sale of all their productions other than cotton. It is a cheer-

ing sign of progress that the people of the Southern States are beginning to appreciate, more highly than ever before, the importance of developing their own home markets by encouraging manufactures.

The immediate relations sustained by manufactures to the several sections of the country are indicated by the following facts in regard to the distribution of manufacturing and mechanical industries: According to the census of 1880 the products of manufacture in the United States were distributed thus: twenty-one per cent. in the New England States; forty-one per cent. in the States of New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia; twenty-nine and a half per cent. in the Western and North-western States; two and a half per cent. in the States of Virginia, North Carolina, South Carolina, and Florida; three and a half per cent. in the States of Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, and Arkansas; and two and a half per cent. in the States of California, Oregon, and Nevada. These facts show the extent to which the manufacturing industries of the United States have become nationalized.

Within the memory of men of middle age, the great West was dependent almost entirely upon the East and upon foreign countries for manufactured products. But the value of the manufactures of that section increased from \$346,675,290 in 1860 to \$1,583,235,706 in 1880. During the latter year, the value of the products of manufacture of the Western and North-western States was fifty per cent. greater than the total value of the products of manufacture in the United States in 1850, and almost equal to the total value of the manufactures of the country in 1860. The very fact of the movement of manufactures toward the great surplus-producing agricultural area of the West clearly proves the mutuality of interest existing between those two great branches of industry.

Through the improvement and extension of the facilities for transportation, and the growing tendency on the part of local traders to purchase "at first hand," the manufacturer has, to a great extent, become a merchant, and local points of manufacture have thus become centers of trade. The products of the manufactures of the West are now shipped not only to all points in the Western States, but also extensively to the Southern States, and to the Eastern States, and certain articles are even

exported to foreign countries. In view of the present rate of increase of manufactures in the Western States, the rapid growth and improvement in the facilities for transportation by rail, and the constant tendency of population westward, it appears safe to predict that, if nothing shall occur to repress the present prosperity of the manufacturing industries of those States during the remaining years of the century, there will be developed between the agricultural and the manufacturing industries of those States a commerce equal in magnitude to the foreign commerce of the United States at the present time. Experience has proved that the domestic commerce thus created will be much more steady and reliable, and, in all probability, in the end more productive of individual and national wealth than trade with foreign countries.

The answer to the old question—more speculative, perhaps, than practical—as to the relative productiveness of agricultural and manufacturing enterprises is, to a certain extent, indicated by the census. The capital employed in the manufactories enumerated in the census amounted to \$2,790,272,606, and the value given to materials in the processes of manufacture, as before stated, amounted approximately to \$2,000,000,000, or 71 per cent. of the capital employed. The value of farms, including land, fences, and buildings, was \$10,197,096,776, and the value of all agricultural productions during the census year is estimated at \$3,600,000,000, or about 35 per cent. of the value of property in farms. From this it would appear that the relative productiveness of capital in manufacturing and in agriculture is as 71 to 35, or two to one. This is, of course, merely a special view of the subject.

Although the average wages paid and the average profits realized in manufacturing industries are greater than the average wages and profits in agricultural pursuits, yet this is offset by the fact that the risks and uncertainties attending the former are greater than those attending the latter. It is impracticable to institute accurate comparisons between the wages, the modes of living, and the expenses of living of persons employed in manufactures and of persons employed in agriculture, or to compare the comforts or the social advantages enjoyed by persons engaged in, or dependent upon, these two very unlike branches of industry. Nor would it be very profitable to attempt to institute such comparisons.

*Mining.*—The total coal product of the United States amounted during the year 1880 to 71,067,576 tons, of which about one-third was used as a generator of power in the manufacturing industries of the country. The population of the United States increased from 31,443,321 in 1860 to 50,155,783 in 1880, an increase of 59 per cent.; but the coal product of the country increased from 15,173,409 tons in 1860 to 71,067,576 tons in 1880, an increase of 368 per cent. As the demands for household purposes probably did not increase very much faster than the population, and the exports of coal amounted to only 187,059 tons in 1860 and to only 615,260 tons in 1880, the increased product was undoubtedly chiefly due to the increased demand for coal as a source of motive power in manufactures and in internal transportation.

The mining of all metallic ores, other than those of the precious metals, is not only intimately connected with, but almost entirely dependent upon manufactures. The increased production of pig iron, from 884,474 tons in 1860 to 4,623,323 in 1882, was almost entirely the result of the growth of the iron and steel manufactures of the United States. This is shown by the fact that only 6,346 tons of pig iron were exported during the year ending June 30, 1882.

*Transportation.*—The advantages realized by the transportation interests of the country from manufactures cannot be stated with precision. About ten per cent. of the east bound, and ninety per cent. of the west bound traffic of the great East and West trunk lines, consist of products of manufactures. From the best information which can be procured, it is estimated that manufactured articles, together with materials and the coal required for supplying motive power in manufacturing industries, constitute about one-half of the freight tonnage of the railroads of the United States. It is probable that considerably more than one-half of the freight receipts of railroads is derived from the transportation of manufactured articles and of material and coal required in their production. This is evident from the fact that the higher and better paying classes of freight consist chiefly of manufactured articles.\*

\*The rates per hundred pounds prevailing at the present time on railroad freight between New York and Chicago are as follows: West bound, first-class, seventy-five cents; second-class, sixty cents; third-class, forty-five cents; fourth-class, thirty-five cents. East bound, first-class, one dollar; second-class, eighty-five cents; ninth-class, forty cents; tenth-class, thirty-five cents.

It may be observed here that a very considerable proportion of the products of agriculture is consumed upon the farm, or in the immediate neighborhood where they are produced, and does not require transportation by rail or on water lines, whereas almost all the products of manufacture, being articles of commerce, do involve such transportation services.

The establishment of manufactures in the large towns and cities of the country has given rise to a most salutary regulating influence over transportation charges on railroads. During the last twenty years competition has arisen between the different manufacturing centers of the West, and also between those points and the manufacturing towns and cities of the Atlantic seaboard. As railroads depend very largely for traffic upon the industrial interests of the manufacturing towns and cities situated upon their lines, railroad managers find it necessary so to adjust rates as to enable those towns and cities to compete with rival manufacturing centers situated on other roads. By this means rail rates have, to a very considerable extent, become indirectly subject to the influence of the law of supply and demand in its operation upon prices. This involves important considerations having a direct bearing upon the railroad problem of the country.

*Internal Commerce.*—The importance of the relations sustained by manufactures to the internal commerce of the United States is indicated by the fact, that the value of the latter is estimated to be at least twenty times as great as the value of the foreign commerce of the country. The facts already presented as to the relations of manufactures to agriculture, to mining, and to transportation, serve also to illustrate the importance of the relations sustained by manufactures to internal commerce.

The total value of the products of manufactures, according to the census of 1880, was \$5,369,579,191,\* of which only about \$100,000,000, or two per cent. was exported, ninety-eight per cent. having been consumed at home, or, in other words, become the subject of internal commerce.

The increased value of manufactures from \$1,885,861,676 in 1860 to \$5,369,579,191 in 1880, of course gave rise to an enormous increase in the internal commerce of the country. Manufactures now constitute the most important element of the commerce of

\* This is subject to considerable reduction on account of unavoidable duplications of products of manufacture. There are, also, as before stated, large amounts of products of manufacture not embraced in this sum. It is, however, impossible to make any closer analysis at the present time.

large towns and cities. The prosperity even of New York City, the great commercial *entrepôt* of the country, at which port seventy-seven per cent. of our foreign commerce is carried on, is, in a much higher degree, dependent upon manufacturing industries than upon foreign commerce. During the year ending June 30, 1880, the value of the total foreign commerce at that city amounted to \$852,497,243, the value of exports amounting to \$392,560,090, and that of imports to \$459,937,153. The total value of the manufactures of the city, however, during the census year, amounted to \$472,926,437, and those of Brooklyn to \$177,223,142. The total value of the manufactures of the two cities—commercially one city—amounting, therefore, to \$650,149,579. But the manufacture and sale of every dollar's worth of products of manufacture probably contributed ten times as much toward the employment of labor and the sustenance of people in these cities as did every dollar's worth of foreign goods imported. The manufacturing industries of the two cities involved not only wages paid for the manufacture of goods, but also wages paid for transporting and receiving materials and coal, and delivering finished products. They also required the use of, and paid rental upon, a large amount of property in the manufacture and storage of merchandise. Besides, the manufactures of the two cities gave rise to a very large business in the purchase and sale of raw materials, and of finished products.

On the other hand, a large part of the foreign exports of New York City consisted of direct shipments from interior points to foreign countries, and another considerable portion paid little more than transfer and warehouse charges. A large portion of the imports of merchandise also passed directly through the city without paying to it any commercial tribute, excepting the incidental expenses of trans-shipment. Other imports paid little more than the expenses of trans-shipment and warehousing.

Besides the trade in the products of the manufactories of New York and Brooklyn, the city of New York also controls the trade, in an enormous amount, of the manufactured products of the New England States, New Jersey, and the State of New York, outside of the two cities mentioned. It is believed that if any person were to take the time to ascertain the value of the trade of wholesale houses in New York City dealing exclusively

in products of American manufacture to an amount equal in the aggregate to the value of the entire foreign commerce carried on, at, or through that city, he would be surprised to find how small a proportion of the business operations of the city his inquiries had covered.

It has already been shown that the products of agriculture in the United States which are exported consist almost entirely of products of the Western and North-western, and of the Southern States, and that the agriculturists of the Atlantic seaboard States depend almost entirely upon markets created by domestic industries and occupations. These facts, in connection with those just stated in relation to the magnitude of the manufactures of New York and Brooklyn and of the commerce carried on in those cities in the manufactures of the surrounding country, indicate to how much greater an extent the agricultural interests of the territory within a radius of two hundred miles of New York City depend upon home industries and home commerce than upon foreign commerce.

When the city of Baltimore reached the age of one hundred and fifty years, she celebrated the event by a procession in which were represented all her manufacturing and mechanical industries. The residents of that city were themselves even more astonished than were strangers by the evidences thus revealed to them of their own industrial resources. A similar exhibition of the industries of New York and Brooklyn, each establishment displaying upon a banner above its exhibit the value of annual product and number of hands employed, would be a much greater surprise, not only to the people of those two cities, but to the whole country. The relations of the agricultural industries of the surrounding country to the manufacturing industries of those two cities might also be forcibly illustrated in the procession by a line of Long Island farm-wagons, loaded with products of market gardening sufficient to supply merely for one day the requirements of all the people in the two cities who are either directly or indirectly dependent for the means of support upon manufacturing enterprises and domestic commerce. The entire exhibition would be an object lesson worth far more for practical instruction in the realities of living than volumes upon political economy.

It is a matter of interest here to advert to the fact that the city of Baltimore, by an ordinance approved February 8, 1881,



authorized the abatement of all taxes upon tools, machinery, engines, etc., constituting the plant of manufacturing establishments in that city. It is stated that this protective measure, in spite of the plausible, though flimsy, sophism as to "Taxing the many for the benefit of the few," met in an especial degree the approval of tax-payers, whose taxes were thereby increased.

The importance of manufactures to the internal commerce of the country is also illustrated in the commercial and industrial experiences of a thousand towns and cities throughout the country. Twenty-five years ago, the cities of Mobile, New Orleans, and Galveston largely dominated the trade of the States situated south of the Ohio River and south of the State of Missouri, but now that trade is mainly controlled by the cities of Cincinnati, Louisville, and St. Louis, and consists largely in the sale of products of the industries of those cities. It was estimated by the Superintendent of the Cincinnati Chamber of Commerce that the total value of the sales of merchandise at that city amounted in 1881 to \$254,000,000, of which the value of goods manufactured in Cincinnati, and there sold, amounted to \$150,000,000, and the value of goods purchased abroad and sold in the course of a purely distributive commerce amounted to \$104,000,000.

The people of the Western towns and cities generally have, within the last fifteen years, been brought to realize the fact that the trade in the products of their own industries is much more reliable and profitable than their jobbing or wholesale trade. Besides, they have seen that manufactures retain in a city a most desirable class. The social advantages afforded by manufacturing industries, whereby the various members of families can be held together in a single community, is a consideration of very great importance. This suggests the humanities which attach to the encouragement of American manufactures,—a view which Hamilton clearly had in mind, and which appeals to human sympathy. A pleasing instance of the active manifestation of this spirit is presented in the work of the Society of Decorative Art of New York City, a society conducted by ladies. These ladies appear to be moved, not only by a noble and discreet philanthropy, but also by the awakened æsthetic sense of our people, a sense which, separated from all silly sentimentality and foolishness which would degrade it, is opening up new avenues of useful employment, and new sources of enjoyment in living. One of the aims of the society is "to induce art

workers to master thoroughly the details of some one kind of decoration in order to attain skill, and make for themselves a reputation of commercial value."

*Banking.* The important relations sustained by manufactures to banking and the finance of commerce are clearly understood by every banker and business man in the country. It is impossible to state the amount of bank capital held by manufacturers, or the proportion of bank credits which is based upon manufactured articles. It is believed, however, that the total amount of such credits is greater than the total amount of credits based upon products of agriculture.

From the foregoing statements it appears that manufactures, and commerce, and agriculture, and mining, and transportation, and banking, and the other great business interests of the country, take hold on each other in innumerable ways, and that, as elements of national prosperity, they are one and inseparable. The depression of one or more of the great manufacturing or mechanical industries of the country would injuriously affect all other business interests, and might result in serious disaster.

As a rule, it is not possible to trace the chain of causation through complex and involved issues, but the dependence of great material interests is sometimes so obvious as clearly to reveal the relation of cause and effect. It is believed that the facts here presented indicate that in a true sense and in a high degree this relation is sustained by our manufacturing industries to the other great business interests of the country. From these facts it appears evident that the protection which has been accorded to American manufacturers has wrought beneficially, and that it is abundantly justified by its results. It would be an idle impeachment of the intelligence and enterprise of our countrymen to assert that home competition in almost all branches of industry is not adequate to the regulation of prices within the limits of fair commercial profits. Exceptional industries, which usually run to monopoly, should, of course, be held amenable to special treatment.

We can only glance at the complex and difficult question as to the adjustment of the tariff to the special needs of different industries which, in varying degrees, require protection through the imposition of duties upon imports. American manufactures may, with respect to such aid, be classified as follows: First, the large and exceedingly important class of industries which need

protection. Second, industries which, from the force of circumstances especially favorable to production in this country, need little, if any, protection in our own markets; and, Third, a much smaller class of industries, which not only need no protection in our own markets, but which, on account of circumstances even more favorable than those pertaining to the class just referred to, are able to meet foreign competition in the markets of other countries. Certain of these industries once stood in need of protection.

So long as the wages paid for labor are from 50 to 150 per cent. greater in the United States than in competing foreign countries, there will be a large class of important industries in this country, one of the conditions to the success of which will be protection, through discriminating duties, against foreign competition in our own markets. The practical question to be considered is the equitable adjustment of duties so as to place such industries under as favorable circumstances as are enjoyed by other of our industries which need no protection. Protection of the sort referred to is not now, and never has been, confined to manufactures. It extends also to agriculture and to mining. The amount of duties collected on imports into the United States during the year ending June 30, 1882, was \$216,138,916; of which \$71,945,900, or thirty-three and a third per cent., was collected on products of agriculture, and \$1,116,000, or half of one per cent., on products of mining.

Formerly, the cost of transportation, both upon the ocean and on railroads, in this country operated in a much higher degree than at the present time as a protection to American manufactures. This has had an important bearing upon the manufactures of the Western and North-western States. The rail rates between Chicago and New York are, at the present time, only about one-half as great as the rates which prevailed between those cities in 1872.

The failure of the National Government to create a department charged with the duty of collecting and furnishing information in regard to manufactures appears strange in view of the fact that there is at Washington a Department of Agriculture, a Bureau of Mining, a Bureau of Education, and a bureau charged with the duty of supplying information in regard to commerce and transportation. This omission appears the more strange in view of the fact that, from the time of the opening of the first Congress, the tariff question—a question having a

direct and exceedingly important bearing upon the prosperity of the manufacturing industries of the country—has been almost constantly the subject of public debate, and has commanded a larger share of the attention of Congress than agriculture, and education, and commerce, and transportation, and mining all together.

It is a matter of deep interest, in conclusion, to advert to the fact that, in his memorable report already referred to, Alexander Hamilton maintained that the promotion of American manufactures would tend to develop both the internal and the foreign commerce of the country, and to advance the interests of agriculture, of mining, of transportation, of banking, and generally of credit in trade. He also clearly showed that the variety of employments afforded by manufactures would, in many ways, be conducive to the general welfare. The correctness of these views has been proved by the logic of events. That which Hamilton saw by faith, is now, in the light of experience, a matter of demonstration. It has been the principal object of this paper to present facts in regard to the industrial interests of the country which prove the wisdom of his policy and evidence the fulfillment of his predictions. History records the names of few other statesmen whose title to immortal fame has been so clearly vindicated by the results of policies which they have conspicuously announced and advocated.

The services rendered to his country by the first Secretary of the Treasury, in his advocacy of the interests of American manufactures, are believed to have been no less important, though at the time, and for many years afterward, they were less conspicuous than were his achievements as a financier in the establishment of the nation's credit; achievements which won for him Daniel Webster's splendid encomium,—“He smote the rock of the national resources, and abundant streams of revenue gushed forth. He touched the dead corpse of Public Credit, and it sprang upon its feet.”

The advancement of manufactures to the front rank as a branch of the industrial interests of the United States,—largely the result of the line of policy which he proclaimed and earnestly commended to his countrymen,—the fulfillment of his grand predictions, and the consummation of his best hopes regarding the prosperity of the industries of his country, add increasing radiance to the glory of his illustrious name.

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